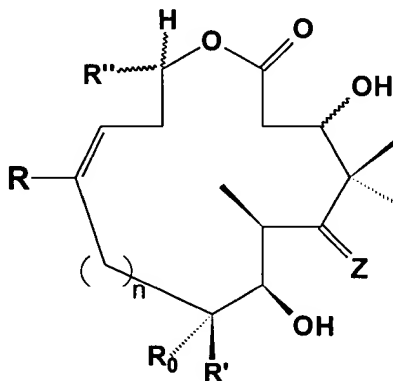


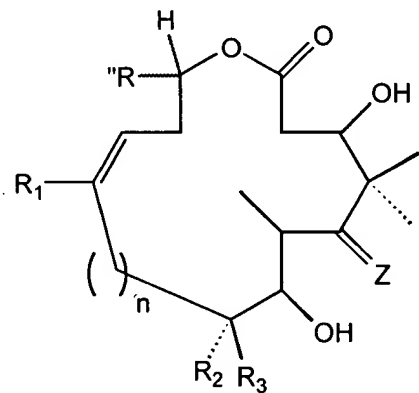
Applicant: Danishefsky *et al.* Examiner: T. Solola
Serial No.: 09/808,451 Group Art Unit: 1626
Filed: March 13, 2001
For: *Synthesis of Epothilones, Intermediates Thereto, Analogues and Uses Thereof*

1. A purified [compound having the structure:

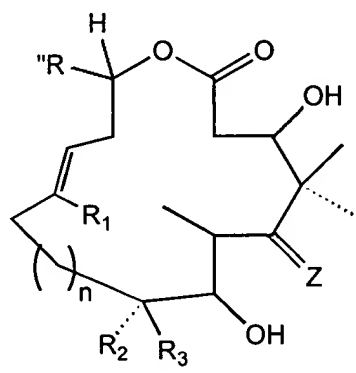


wherein R, R₀, and R' are independently H, linear or branched chain alkyl, optionally substituted by hydroxy, alkoxy, carboxy, carboxaldehyde linear or branched alkyl or cyclic acetal, fluorine, NR₁R₂, N-hydroximino, or N-alkoxyimino, wherein R₁ and R₂ are independently H, phenyl, benzyl, linear or branched chain alkyl; wherein R'' is -CHY=CHX, or H, linear or branched chain alkyl, phenyl, 2-methyl-1,3-thiazolynyl, 2-furanyl, 3-furanyl, 4-furanyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, imidazolyl, 2-methyl-1,3-oxazolynyl, 3-indolyl or 6-indolyl; and wherein X is H, linear or branched chain alkyl, phenyl, 2-methyl-1,3-thiazolynyl, 2-furanyl, 3-furanyl, 4-furanyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, imidazolyl, 2-methyl-1,3-oxazolynyl, 3-indolyl or 6-indolyl; wherein Y is H or linear or branched chain alkyl; wherein Z is O, N(OR₃) or N-NR₄R₅, wherein R₃, R₄ and R₅ are independently H or a linear or branched alkyl; and wherein n is 0, 1, 2, or 3] compound having the structure:

a



or a compound having the structure:



or a pharmaceutically acceptable derivative thereof,

wherein R_1 , R_2 , and R_3 are each independently H, linear or branched chain alkyl, optionally substituted by hydroxy, substituted or unsubstituted alkoxy, substituted or unsubstituted carboxy, carboxaldehyde, substituted or unsubstituted, linear or branched alkyl or cyclic acetal, fluorine, NR_4R_5 , N-hydroximino, or N-alkoxyimino, wherein R_4 and R_5 are independently H, phenyl, benzyl, linear or branched chain alkyl;

R'' is $-CY=CHX$, or H, linear or branched chain alkyl, phenyl, or 2-methyl-1,3-thiazol-4-yl, wherein X is H, linear or branched chain alkyl, phenyl, or 2-methyl-1,3-thiazol-4-yl, and Y is H or linear or branched chain alkyl;

Z is O, $N(OR_6)$ or $N-NR_7R_8$, wherein R_6 , R_7 and R_8 are independently H or a linear or branched chain alkyl or alkoxy; and

n is 0, 1, 2, or 3.